



C09-EE-306

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**BOARD DIPLOMA EXAMINATION, (C-09)
OCT/NOV—2016
DEEE—THIRD SEMESTER EXAMINATION
ELECTRONICS ENGINEERING**

Time : 3 hours]

[Total Marks : 80

PART—A

3×10=30

Instructions : (1) Answer **all** questions.

(2) Each question carries **three** marks.

(3) Answer should be brief and straight to the point and shall not exceed *five* simple sentences.

1. Draw the circuit for half-wave rectifier with input and output voltages and current waveforms.
2. State the need of a filter.
3. (a) Draw the basic structure of UJT with circuit symbol.
(b) Define ripple factor and give its formula.
4. List the applications of LCD.
5. What are the differences between FET and BJT?
6. Define operating point.
7. Classify amplifiers on the basis of period of conduction.

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8. List the ^{*} applications of OP-AMPs.
9. Classify the different types of oscillators.
10. State the need for industrial timers.

PART—B

10×5=50

Instructions : (1) Answer *any five* questions.

(2) Each question carries **ten** marks.

(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. Explain the working principle of FWR with capacitor filter.
12. Explain the construction and working of JFET.
13. Explain potential divider biasing.
14. Explain the principle of operation of direct-coupled amplifier with circuit diagram in detail.
15. (a) Explain the effect of feedback on gain, bandwidth and distortion. 6
(b) Draw the block diagram of different types of feedback amplifiers. 4
16. Explain the working principle of complementary push-pull power amplifier with circuit diagram.
17. Draw and explain the working of RC phase-shift oscillator.
18. Explain the block diagram of CRO in detail and list the applications of it.

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